DOCUMENT RESUME

ED 139 976 CE 010 997

AUTHOR Goldsbury, Paul; And Others
TITLE American Industries. Performance Objectives. Volume 1.
INSTITUTION Duval County School Board, Jacksonville, Fla.
PUB DATE Jul 75
NOTE 175p.; For a related document see CE 010 989

EDRS PRICE MF-$0.83 HC-$8.69 Plus Postage.
DESCRIPTORS Agricultural Education; *Agriculture; *Behavioral Objectives; *Career Exploration; *Construction Industry; *Criterion Referenced Tests; Curriculum Guides; Industrial Education; *Industry; Junior High Schools; Shop Curriculum; Student Evaluation; Trade and Industrial Education
IDENTIFIERS United States

ABSTRACT

Several intermediate performance objectives and corresponding criterion measures are listed for each of the three categories (American Industries Orientation, Agriculture, and Construction) included in this first of a two-volume course guide on American industries. The materials were developed for a 9- to 12-week course for seventh grade students to acquaint them with the concepts of major American industrial enterprises. American Industries Orientation includes five terminal objective sections: Safety, Criterion Measures, Elements of Industry, Planning, and Measurements. Agriculture includes seven terminal objective sections: Occupations, Tools, Turfgrass, Fertilizing, Vegetable Gardening and Container Growing, Conservation, and Horticulture Maintenance. Construction includes six terminal objective sections: Occupations, Characteristics of Wood Materials, Hand Tools, Wood Joining and Fastening, Finishing, and Mass Production. Information for instructors is also included. (This manual and 54 others were developed for various secondary level vocational courses using the System Approach for Education (SAFE) guidelines.) (HD)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED139976

PERFORMANCE OBJECTIVES

American Industries

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CE 010 997

DUVAL COUNTY SCHOOL BOARD

Volume 1

DUVAL COUNTY PUBLIC SCHOOLS
July, 1975

Dr. John T. Gunning
Superintendent of Schools

Mr. William Carter, Chairman
Mr. Wendell Holmes, Jr., Vice Chairman
Mr. Joseph Cullen
Mrs. Gene Miller
Mr. Nathan Wilson
Mr. Hugh Stevens
Mr. Jack Nooney

Dr. Donald Johnson
Associate Superintendent of Curriculum

David A. Rigsby
Director, Vocational-Technical Education

Lowell T. Hudson
Supervisor of Industrial Arts

3

* ACKNOWLEDGEMENTS *

This manual has been developed following guidelines established by S. A. F. E. (System Approach for Education) training program.

Recognition and appreciation are extended to the following educators who have assisted in the preparation of this manual.

Mr. David A. Rigsby, Director of Vocational Education
Mr. Lowell T. Hudson, Supervisor of Industrial Arts

The following educators participated as writers of this manual.

*Mr. Paul Goldsbury, Terry Parker Senior High
Mr. Larry Hilbert, Paxon Senior High
Mr. Richard Jones, Sandalwood Junior-Senior High
Mr. John Morrison, Terry Parker Senior High
Mr. William Paige, Sandalwood Junior-Senior High

*Chairman

Manual prepared by . . . . Duval County Print Shops

Typist . . . . Mrs. Nancy Turner

MAKE UP AND USE OF THIS MANUAL

Definitions:

Terminal Performance Objectives - are objectives referring to a behavior, knowledge, or skill you want the learner to demonstrate at the end of a particular unit or section. They are written in gross, overall terms.

Intermediate Performance Objectives - are sub-functions of terminal objectives referring to a behavior, knowledge or skill you want the learner to demonstrate along the way towards mastery of the terminal objectives. They are written in specific terms.

Criterion Evaluation - are the actual tests of evaluation exactly as it will be presented to the learner to see if he has met the objectives.

Method Media Analysis - specifically refers to personnel resources, tools, vehicles, software, and hardware - the physical hows for implementing the methods or ways of curriculum implementation. (Each media center is different in the materials available to assist the instructor in lecturing and demonstrating. Therefore, the individual instructor must research the school's media center for the appropriate materials to be used.)

Levels of Performance - The levels of performance (how well it must be done) given in this manual have been arrived at by the authors through past experiences and by consultation with other Industrial Arts teachers in Duval County. These levels are subject to change after try out. They are written as average levels of attainment that all students should achieve. This by no means limits the instructor, who can teach as far above the level as possible.

These objectives are minimal - The objectives in this manual represent the basic "need to know" knowledge and skills that should be attainable by any student that meets the prerequisites of the courses.

Course Prerequisites - The prerequisites for these courses may need revision. For example, if your course calls for a certain skills in reading ability and you are getting students below this ability that cannot perform up the course standards, then a prerequisite of "must be able to read at the ____ level" may be needed.

INTRODUCTION

This manual of Performance Objectives has been re-written and revised from the original manual introduced for the 1972-1973 school year. A pre and post examination has been added to test the level of attainment of each learner before any instruction and to be used again at the completion of the course as a final examination. It also includes Learning Steps, Criterion Evaluation and Methods-Media Sections.

Your own teaching methods and equipment may change the chronological order in which the objectives are here-in presented. Also, it is not necessary to use a specific objective as written as each may be altered to fit your own particular situation. It should be your responsibility to cover the material given so as to insure course content and uniformity of instruction throughout the system.

The Media of instruction for each Intermediate Performance Objective should be from the State of Florida Adopted Textbook listings and your should select those to which you have access. Any additional materials should be used at your own discretion.

In revising this edition from its original form, an attempt has been made to eliminate as much of the mechanics of teaching as possible. Employ your own methods and use the equipment you have available. The emphasis is placed on learning the core of each particular area and not on how it should be taught. This manual is not intended to dictate nor limit your program but should be used as a guide for the course for which it is intended.

The Time Requirements section of each Learning Step has been omitted so that you can make your own entries for future reference.

Lowell T. Hudson
Supervisor of Industrial Arts
Duval County School Board

Instructors Information

This manual is written on a twelve week basis. It is realized by the writers that time length allotments vary in different schools when using the wheel type course coverage. You should cover as much material as your particular situation allows and intergrate your own teaching methods as you feel warrented and necessary. This manual emphasizes hands on activities.

An attempt has been made to eliminate tedious oral and written exercises whereever possible. Suggestions are made and examples given to emphasize and enforce the practical application of each objective but your own personal ideas, examples, and projects may be substituted to obtain the desired results.

The performance objectives in this manual cover the accreditation standards prescribed by the State Department of Education. Selection of the areas to be explored is determined by your own situation but each learner is expected to meet the minimal requirements of the State.

Orientation to American Industry is treated as a unit and encompasses all areas of the manual. Utilize it as it pertains to each area.

-- ACKNOWLEDGEMENTS --

This manual has been developed following guidelines established by S. A. F. E. (System Approach for Education) training program.

Recognition and appreciation are extended to the following educators who have assisted in the preparation of this manual.

Mr. David A. Rigsby, Director of Vocational Education

Mr. Lowell T. Hudson, Supervisor of Industrial Arts

The following educators participated as writers of this manual.

Mr. Edwood Bunch, Edward White Sr. High School

* Mr. Paul Goldsbury, Terry Parker Sr. High School

Mr. Larry Hilbert, Paxon Sr. High School

Mr. Dick Jones, Sandalwood Jr. - Sr. High School

Mr. William Page, Sandalwood Jr. - Sr. High School

Mr. Michael Widman, DuPont Jr. High School

Typist .... Helen Watson

* Chairman

COURSE DESCRIPTION

AMERICAN INDUSTRIES

Accreditator No. 5890
Grade Level - 7th
Course Length - 9-12 weeks

A study of the concepts of major American Industrial enterprises. The student will exhibit a predetermined acceptable degree of Industrial literacy and knowledge in the following areas:

a) An insight into occupational goals and selection.

b) Demonstrate and apply skills in the use of hand and basic power tools and equipment.

c) Experience laboratory situations in mass production, personnel organization, material selection, forming and finishing.

d) Demonstrate problem solving abilities through research, experimentation and development.

e) Exhibit safe laboratory practices as they relate to school, home and community.

This manual is written on a twelve week basis. It is realized by the writers that time length allotments vary in different schools when using the wheel type course coverage. You should cover as much material as your particular situation allows and intergrate your own teaching methods as you feel warranted and necessary. This manual emphasizes hands on activities.

An attempt has been made to eliminate tedious oral and written exercises where-ever possible. Suggestions are made and examples given to emphasize and enforce the practical application of each objective but your own personal ideas, examples, and projects may be substituted to obtain the desired results.

The performance objectives in this manual cover the accreditation standards prescribed by the State Department of Education. Selection of the areas to be explored is determined by your own situation but each learner is expected to meet the minimal requirements of the State.

Orientation to American Industry is treated as a unit and encompasses all areas of the manual. Utilize it as it pertains to each area.

Instructors Information

It is suggested that to properly instruct agriculture, a starting point would be a group project combining Construction and Agriculture classes into a group to construct an outside greenhouse. It should be of simple construction. It can be built using 2 x 4's and corrugated fiber glass sheets or 2 x 4's (or bent 3/4 inch pipe) covered with 2 inch chicken wire and rolled polyehtylene sheeting. The size and meterials to be used would be restricted by space available and cost factors. Suggested space dimensions would be 12 ft. x 12 ft. square frame with a 7 ft. head height. It should have a closable access door and upper ventilation outlets at both ends. Commercial designs and pre-fabricated houses are available but cost is prohibitive.

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 1.0 Safety

The learner will list in writing the general safety rules of the American Industries laboratories and physically demonstrate his ability and willingness to practice these rules. He will do this with 95% proficiency.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.1	The learner will write the basic safety rules of the American Industries laboratory.	1.1.1	Write 12 of the 15 general shop safety rules. 1) No horseplay 2) Wear protective clothing 3) Know your tools and equipment before using them 4) Use the proper tool 5) When in doubt, ask the instructor 6) Follow instructions 7) Keep the shop and work areas clean 8) Report broken or unsafe tools 9) Use common sense 10) Carry tools with the cutting points down and away from you 11) Wear safety eye protection 12) Know where the fire extinguishers are located 13) Ask permission before operating any equipment 14) Report all accidents no matter how slight 15) Remember the A B C's of Safety. ALWAYS BE CAREFUL
1.2	Demonstrate physically your ability to practice the general Safety rules of the American Industries laboratory.	1.2.1	You will be observed and graded daily on your ability to practice the general shop safety rules.

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0

Criterion Measures

The learner will demonstrate in wiriting, with 75% proficiency, his understanding of the Criterion Measures of the American Industries laboratories.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.1	Given the following grades, figure a 4 weeks total point average A - B - E - D - C	2.1.1	Write the total points earned average for the following grade-point ratio A = 4 B = 3 C = 2 D = 1 E = 0 10 = total points earned
2.2	Figure the final grade average from the total points earned in I.P.O. 2.1	2.2.1	Write the final grade average using the following formula. Total points number grades 10 5 = 2 (C)

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 3.0

Elements of Industry

The learner, with 70% proficiency, will design a manufacturing flow chart and will, in writing, define the elements of industry. (This relates to each area offering at the time it is offered.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	Design and draw a chart of the elements of Industry	3.1.1	Using the following facets of Industrial production, draw a chart of the following elements of industry 1) Research & development 2) Production tooling 3) Production control 4) Duality control 5) Personnel management 6) Manufacturing 7) Marketing
3.2	Define the responsibilities of each element of industry.	3.2.1	On the chart drawn in 3.1.1.— write a definition of each element.

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 4.0

Planning

The learner will write a Bill of Materials list and incorporate a steps of procedure guideline for production of a finished project. He will do this with 80% proficiency.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.1	Given a planning sheet, enter in the Bill of Materials section.	4.1.1	Write in the number, size name,and materials of the pieces needed to complete the Bill of Materials section of the planning sheet.
4.2	Complete the tools and machines section of the planning sheet.	4.2.1	Write in the tools and machines to be used in the Tools and Machines section of the planning sheet.
4.3	Complete the Steps of Procedure section of the planning sheet.	4.3.1	Write in the steps of completion as they are to be followed in the completion of a project.

AMERICAN INDUSTRIES

ORIENTATION

1.0 Safety
2.0 Criterion Measures
3.0 Elements of Industry
4.0 Planning
5.0 Measurements

AMERICAN INDUSTRIES

ORIENTATION

1.0 Safety

2.0 Criterion Measures

3.0 Elements of Industry

4.0 Planning

5.0 Measurements

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 1.0

Safety

The learner will list in writing the general safety rules of the American Industries laboratories and physically demonstrate his ability and willingness to practice these rules. He will do this with 95% proficiency.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.1	The learner will write the basic safety rules of the American Industries laboratory.	1.1.1	Write 12 of the 15 general shop safety rules. 1) No horseplay 2) Wear protective clothing 3) Know your tools and equipment before using them 4) Use the proper tool 5) When in doubt, ask the instructor 6) Follow instructions 7) Keep the shop and work areas clean 8) Report broken or unsafe tools 9) Use common sense 10) Carry tools with the cutting points down and away from you 11) Wear safety eye protection 12) Know where the fire extinguishers are located 13) Ask permission before operating any equipment 14) Report all accidents no matter how slight 15) Remember the A B C's of Safety. ALWAYS BE CAREFUL
1.2	Demonstrate physically your ability to practice the general Safety rules of the American Industries laboratory.	1.2.1	You will be observed and graded daily on your ability to practice the general shop safety rules.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 1.0

INTERIM PERFORMANCE OBJECTIVE 1.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
1.1.1	Recall Safety Rules	1.1.1	Write twelve (12) of the fifteen (15) basic Shop Safety Rules.	1.1.1	Hand out Lecture Demonstration Textbook	
1.1 2	Recognize general safety rules in daily school and home activities.	1.1.2	Use the rules of Shop Safety as they apply to daily activities.	1.1.2	Lecture Demonstration	

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0

Criterion Measures

The learner will demonstrate in wiriting, with 75% proficiency, his understanding of the Criterion Measures of the American Industries laboratories.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.1	Given the following grades, figure a 4 weeks total point average A - B - E - D - C	2.1.1	Write the total points earned average for the following grade-point ratio A = 4 B = 3 C = 2 D = 1 E = 0 10 = total points earned
2.2	Figure the final grade average from the total points earned in I.P.O. 2.1	2.2.1	Write the final grade average using the following formula. Total points ÷ number grades 10 ÷ 5 = 2 (C)

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 2.0

INTERIM PERFORMANCE OBJECTIVE (2.1) - (2.2)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
2.1.1	Recall grades.	2.1.1	List in writing, the grades earned for a given period.			
2.1.2	Recall grade-point ratios.	2.1.1	Write the points earned in a given grading period.			
2.2.1	Recall grade averaging.	2.2.1	Write the total points earned in a	2.2.1	Chalkboard Lecture School Policy Manual	
2.2.2	Average a grade.	2.2.2	Write a final grade average using the formula given in C. M. 2.2.1.	2.2.2	Chalkboard Lecture	

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 3.0

Elements of Industry

The learner, with 70% proficiency, will design a manufacturing flow chart and will, in writing, define the elements of industry. (This relates to each area offering at the time it is offered.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	Design and draw a chart of the elements of Industry.	3.1.1	Using the following stages of Industrial production, draw a chart of the following elements of industry 1) Research & development 2) Production tooling 3) Production control 4) Quality control 5) Personnel management 6) Manufacturing 7) Marketing
3.2	Define the responsibilities of each element of industry.	3.2.1	On the chart drawn in 3.1.1.— write a definition of each element.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 3.0

INTERIM PERFORMANCE OBJECTIVE (3.1) - (3.2)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
3.1.1	Recall the stages of Industrial production.	3.1.1	Write the stages of Industrial production.	3.1.1	Textbook Lecture	
3.1.2	Recall the graphic chart drawing.	3.1.2	Draw a chart to represent Industrial production stages.	3.1.2	Lecture	
3.2.1	Recall the elements of Industrial production.	3.2.1	Write the elements of Industrial production on a graphic chart.	3.2.1	Lecture Chalkboard Textbook Media Center material	
3.2.2	Recall the responsibilities of each stage of Industrial production.	3.2.2	Write, on the graphic of 3.2.1 C.M. - the responsibilities of each stage of Industrial production.	3.2.2	Lecture Chalkboard Textbook Media Center Material	

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE OBJECTIVE NO. 4.0

Planning

The learner will write a Bill of Materials list and incorporate a steps of procedure sheet for production of a finished project. He will do this with 80% proficiency.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.1	Given a planning sheet, enter in the Bill of Materials section.	4.1.1	Write in the number, size,name,and materials of the pieces needed to complete the Bill of Materials section of the planning sheet.
4.2	Complete the tools and machines section of the planning sheet.	4.2.1	Write in the tools and machines to be used in the Tools and Machines section of the planning sheet.
4.3	Complete the Steps of Procedure section of the planning sheet.	4.3.1	Write in the steps of completion as they are to be followed in the completion of a project.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 4.0

INTERIM PERFORMANCE OBJECTIVE (4.1) - (4.2)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
4.1.1	Identify a Bill of Materials sheet.	4.1.1	Identify orally, the Bill of Materials section of a planning sheet.	4.1.1	Lecture Hand out sheet	
4.1.2	Recall correct entries on a Bill of Materials sheet.	4.1.2	Write in the correct name, size and number on a Bill of Materials sheet.	4.1.2	Lecture Hand out Sheet	
4.2.1	Identify the tools and machine section of a planning sheet.	4.2.1	Identify orally, the tools and machine section of a planning sheet.	4.2.1	Lecture Hand out sheet	
4.2.2	Recall correct entries on a tools and machine section a planning	4.2.2	Write in the proper tools and equipment.	4.2.2	Lecture Hand out sheet	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 4.0

INTERIM PERFORMANCE OBJECTIVE 4.3

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
4.3.1	Identify the steps of procedure section of a planning sheet.	4.3.1	Identify orally, the steps of procedure section of a planning sheet.	4.3.1	Lecture Hand out sheet	
4.3.2	Recall correct entries in the procedure section of a planning sheet.	4.3.2	Write in the steps of procedure in the proper section.	4.3.2	Lecture Hand out sheet	

COURSE AMERICAN INDUSTRIES

(ORIENTATION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0

Measurements

The learner will define measurement and measuring instruments and demonstrate his ability to properly measure given items and apply this ability to a finished product. He will do this with 90% accuracy. (Use the measuring instruments listed as they apply to your particular area.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.1	Orally define Measurement	5.1.1	Measurement is the comparison of something to a standard unit.
5.2	Orally identify the following measuring instruments. 1) Balance 2) Ruler (folding and straight) 3) Ammeter 4) Micrometer 5) Steel measuring tape	5.2.1	Identify the measiring instruments displayed.
5.3	Demonstrate the proper use of each instrument identified in I.P.O. 5.2	5.3.1	Properly measure or weigh the items issued you by your instructor.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5.0

INTERIM PERFORMANCE OBJECTIVE (5.1) - (5.2)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5.1.1	Recall the definition of measurement.	5.1.1	Orally identify measuring.	5.1.1	Textbook Lecture	
5.1.2	Write a definition of measurement.	5.1.2	Write a definition of measurement.	5.1.2	Textbook Lecture	
5.2.1	Recall measuring instruments.	5.2.1	Orally name five (5) measuring instruments of American Industries.	5.2.1	Lecture Display Instruments	
5.2.2	Recall use of measuring instruments	5.2.2	Orally define what the five (5) instruments displayed, measure.	5.2.2	Lecture Display	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5.0

INTERIM PERFORMANCE OBJECTIVE 5.3

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5.3.1	Recognize the use of measuring instruments.	5.3.1	Orally state the proper use of the instruments displayed.	5.3.12	Display Demonstration	
5.3.2	Demonstrate the ability to measure.	5.3.1	Measure or weigh the items displayed with the proper instrument.	5.3.1	Display Demonstration	

LEARNING PACKAGE

AMERICAN INDUSTRIES

SAFETY

(x 4.172 - level 1-B)

Performance Objective No. 1.0
Intermediate Objective No. 1.1

Source of your information ____________ ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

On an examination hand out sheet, you are to write twelve (12) of fifteen (15) general shop rules.

LEARNING PACKAGE

AMERICAN INDUSTRIES

SAFETY

(x 4.166 - level 2-G)

Performance Objective No. 1.0
Intermediate Objective No. 1.2

Source of your information ________ ________
Author ________
Edition date ________

(Do not write on this sheet)

Demonstrate your ability to practice the A B C ' s of safety both in the laboratories and at home.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.172 - level 1-B)

Performance Objective No. 2.0
Intermediate Objective No. 2.1

Source of your information ____
Author ____
Edition date ____

(Do not write on this sheet)

On a hand out sheet write the grades you have earned for an assigned grading period.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.172 - level 1-B)

Performance Objective No. 2.0
Intermediate Objective No. 2.2

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Convert your earned grades to a point ratio and write your final grade average for an assigned grading period.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.167 - level 1-C)

Performance Objective No. 3.0
Intermediate Objective No. 3.1

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Write the seven (7) stages of the elements of Industrial production and define each.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.167 - level 1-E)

Performance Objective No. 3.0
Intermediate Objective No. 3.2

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Draw a graphic representation to illustrate the seven (7) elements of industry and enter a definition of each.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.160 - level 3-C)

Performance Objective No. 4.0
Intermediate Objective No. 4.1

Source of your information ____________ ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

List the materials needed to complete an assignment and enter it on the planning sheet issued.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.160 - level 3-C)

Performance Objective No. 4.0
Intermediate Objective No. 4.2

Source of your information ________ ________
Author ________
Edition date ________

(Do not write on this sheet)

List the tools and machine necessary to complete an assignment and enter it on the planning sheet.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.170 - level 2-C)

Performance Objective No. 4.0

Intermediate Objective No. 4.3

Source of your information ____________ ____________

Author ____________

Edition date ____________

(Do not write on this sheet)

Enter the steps necessary, in sequential order, to complete an assignment on a planning sheet.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.160 - Level 3-C)

Performance Objective No. 5.0
Intermediate Objective No. 5.1

Source of your information ____________ ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

Orally state the definition of measurements

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.161 - level 1-C)

Performance Objective No. 5.0
Intermediate Objective No. 5.2

Source of your information __________ __________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Orally identify the measuring instruments displayed.

LEARNING PACKAGE

AMERICAN INDUSTRIES

ORIENTATION

(x 4.160 - Level 2-D)

Performance Objective No. 5.0
Intermediate Objective No. 5.3

Source of your information ________ ________
Author ________
Edition date ________

(Do not write on this sheet)

Measure or weigh the items given you with the proper instruments.

AGRICULTURE

7th Grade

1.0 Occupations

2.0 Tools

3.0 Turfgrass

4.0 Fertilizing

5.0 Vegetable gardening

5.0A Container growing

6.0 Conservation

7.0 Horticulture Maintenance

COURSE AMERICAN INDUSTRIES

A G R I C U L T U R E

TERMINAL PERFORMANCE
OBJECTIVE NO. 1.0

Occupations

The learner will identify and describe, in writing, two (2) occupations of the Agriculture Industries with 80% proficiency and will demonstrate in writing his knowledge of the Agriculture Industries in today's world.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.1	Define in writing the ten (10) following occupational areas given: 1) Commodity grader 2) Agricultural Engineer 3) Agronomist 4) Husbandman 5) Animal Keeper 6) Business Manager 7) Butcher 8) County Agent 9) Forest Rangers 10) Botanist	1.1	Using textbook and Media Center materials as reference write a brief description of any two (2) of the ten (10) agricultural positions listed. Include entrance requirements, necessary training, working conditions and renumerations expected.
1.2	Write a description of the major agricultural products of the United States.	1.2.	Using your text as a reference, select two (2) states of the United States, and briefly write a description of the major agriculture enterprises of each.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 1.0

INTERIM PERFORMANCE OBJECTIVE 1.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQUIR
1.1.1	Recall names of Agricultural occupations	1.1.1	Orally name (two (2) occupations of agriculture	1.1.1	Textbook Media Center	
1.1.2	Define agriculture occupations	1.1.2	Define the two (2) agriculture occupations named in 1.1.1	1.1.2	Textbook Media Center	

COURSE AMERICAN INDUSTRIES

AGRICULTURE

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0

Garden Tools

With 60% accuracy the learner will identify common garden tools and be able to describe and use these tools.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.1	Identify orally the tools which are common garden tools. List 1. Common Garden Hoe 2. Four Tine Spading Fork 3. Sq. Pt. Garden Spade 4. Garden Trowell 5. Hand Dibble 6. Hand weeder-Cultivator three prong or tine 7. Scuffle Hoe 8. Spring Bow Rake 9. Level Head Rake 10. One Wheel Push Cultivator 11. Level 12. Square 13. Cold Chisel	2.1.1	Identify orally six (6) common garden tools of the thirteen (13) displayed.

COURSE AMERICAN INDUSTRIES

AGRICULTURE

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0

Garden Tools

(Cont.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.2	Select the proper tool(s) for each of the tasks listed below. 1) Turning the soil 2) Planting seed or small plants 3) Leveling a bed area 4) Cultivating and weeding by small plants 5) Make shallow trenches for seed sowing 1) Spading fork or spade 2) Hand Dibble 3) Spring Bow or Level-Head Rake 4) Hand Weeder/Cultivator 5) Common Garder Hoe	2.2.1	Orally identify the proper tool(s) for at least three (3) of five (5) garden tasks from those displayed

COURSE AMERICAN INDUSTRIES

AGRICULTURE

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0 Garden Tools

(Cont.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.3	Orally identify the use of the following garden tools. 1) One Wheel Push Cultivator 2) Garden Trowell 3) Common Garden Hoe 4) Level Head Rake 5) Four-Tine Spading Fork 1) Cultivate, loosen soil and destroy weeds 2) Plant small plants out of pots or other containers 3) Make shallow trenches for sowing seed and destroying weeds 4) Level bed areas and remove debris 5) Turn soil in preparation for planting	2.3.1	Orally describe the proper use for at least four (4) garden tools from a display.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 2.0

INTERIM PERFORMANCE OBJECTIVE (2.1) (2.2) (2.3)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQU.
2.1.1	Identify orally garden tools displayed	2.1.1	Orally name the garden tools displayed	2.1.1	Lectures Catalogs Actual Tools Ditto Materials (Sketches or Drawings)	
2.1.2	Recall the garden tool displayed	2.1.2	Identify orally eight (8) common garden tools of the 15 displayed tools	2.1.2	Display Lecture	
2.2.1	Orally identify garden tools	2.2.1	Orally name the garden tool(s) from a display	2.2.1	Catalogs Lecture Discussion Slides	
2.2.2	Recall uses of Garden Tools	2.2.2	Orally identify the proper tool(s) from a display and state a use of each	2.2.2	Lecture Display Textbook	
2.3.1	Orally identify garden tools	2.3.1	Orally describe the use(s) of the displayed garden tools	2.3.1	Display Lecture Textbook	
2.3.2	Recall uses of Garden Tools	2.3.2	From the display of five (5) tools, orally describe the use of four (4)	2.3.2	Display Lecture Textbook	

COURSE AMERICAN INDUSTRIES

AGRICULTURE

TERMINAL PERFORMANCE
OBJECTIVE NO. 3.0

Turfgrass

With 75% proficiency, the learner will visually identify and orally describe four (4) of six (6) grass samples shown. He will specify which grasses are best suited for local planting and the conditions necessary for these grasses to survive.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	Orally name the grass samples displayed: 1) Bermuda a. rapid spreader b. 6 inches to 12 inches high c. requires not to wet soil d. a hot weather grass e. for pasture or lawn 2) Blue Grass a. 2 inches to 20 inches high b. cool area grass c. pasture grass 3) St. Augustine a. shade grass b. withstands salt spray c. best Florida grass d. needs nitrogen fertilizer and chinch bug protection 4) Centipede a. low maintenance b. little water c. insect and disease resistable d. needs iron additives e. not for pastures	3.1.1	Point to and name four (4) of the six (6) grass samples displayed.

COURSE AMERICAN INDUSTRIES

A G R I C U L T U R E

TERMINAL PERFORMANCE
OBJECTIVE NO. 3.0

Turfgrass

(Cont.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	5) Zoysia (Japanese lawn grass) a. course grass b. retains color c. needs fertilizer d. dark green color e. needs fertilizing 6) Rye a. 3 ft. to 5 ft. tall b. blue grass c. pasture grass d. good soil protection		
3.2	State orally the qualities and characteristics of grass varities.	3.2	Orally state at least three (3) characteristics or qualities of each sample of grass you identify in 3.1.
3.3	Identify the conditions under which certain grasses best thrive and the proper use for these grasses.	3.3	Orally state the conditions under which the grass samples you identified in 3.1 would best thrive and state orally the results to be expected from cultivating each.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 3.0

INTERIM PERFORMANCE OBJECTIVE 3.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
3.1.1	Recall grass names	3.1.1	Orally recall grass names	3.1.1	Lecture Samples Textbook	
3.1.2	Identify grass samples	3.1.2	Orally identify grass samples displayed	3.1.2	Lecture Samples Textbook	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 3.0

INTERIM PERFORMANCE OBJECTIVE 3.2

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
3.2.1	Recall grass qualities and characteristics	3.2.1	Orally recall grass qualities and characteristics	3.2.1	Textbook Lecture Samples	
3.2.2	Identify grass qualities and characteristics	3.2.2	Identify and state orally the grass quality and characteristics of the grasses displayed	3.2.2	Textbook Samples Lecture	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 3.0

INTERIM PERFORMANCE OBJECTIVE 3.3

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
3.3.1	Recall productive grass growing conditions.	3.3.1	Orally state best conditions for the grass samples identified in 3.1 to thrive.	3.3.1	Lecture Samples Textbook	
3.3.2	Recall best application of grass varieties.	3.3.2	Orally state the application of the grasses identified in 3.1.	3.3.2	Lecture Samples TExtbook	

COURSE AMERICAN INDUSTRIES

AGRICULTURE

TERMINAL PERFORMANCE
OBJECTIVE NO. 4.0

Fertilizing

With 80% proficiency, the learner will define fertilizer and demonstrate his ability to properly calibrate, fill and use a manual push type fertilizer spreader.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.1	Properly identify the fertilizer spreader displayed and properly set the calibrater.	4.1.1	Verbally identify the spreader shown you and properly set the measuring dial and calibrater to fertilize 1,000 sq. foot of your school's lawn.
4.2	Select a plot of school lawn 100 x 10 feet and demonstrate proper fertilizing of this plot.	4.2.1	Fill the fertilizer with the instructor approved fertilizer mixture and physically fertilize the plot assigned you.
4.3	Demonstrate your proficiency in after use cleaning of a manual fertilizer spreader.	4.3.1	Using water, properly clean the spreader after using, and oil all points necessary prior to storage.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 4.0

INTERIM PERFORMANCE OBJECTIVE 4.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
4.1.1	Identify a manually operated fertilizer spreader	4.1.1	Orally identify a manually operated fertilizer spreader	4.1.1	Sample Lecture	
4.1.2	Properly calibrate a fertilizer spreader	4.1.2	Calibrate a fertilizer spreader	4.1.2	Sample Lecture Demonstration Manual	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 4.0

INTERIM PERFORMANCE OBJECTIVE 4.2

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
4.2.1	Select a lawn plot 100 ft. x 10 ft.	4.2.1	Stake out a lawn plot 100 ft. x 10 ft.	4.2.1	Lecture - Demonstration	
4.2.2	Fertilize plot selected in L. S. 4.2.1	4.2.2	Physically fertilize the selected plot.	4.2.2	Demonstration	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 4.0

INTERIM PERFORMANCE OBJECTIVE 4.3

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
4.3.1	Recall cleaning procedures of a manually operated fertilizer spreader	4.3.1	Physically clean a manually operated fertilizer spreader.	4.3.1	Manufactures Manual Demonstration Lecture	

INSTRUCTORS INFORMATION

There are two (2) Terminal Performance Objectives given for T. P. O. 5. If space, climate or conditions for outside planting prohibit the use of T. P. O. 5, use T. P. O. 5A as an alternative.

COURSE AMERICAN INDUSTRIES

AGRICULTURE

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0

Vegetable Gardening

The learner will assist in a garden site selection, properly prepare the soil, and plant a vegetable producing garden with 80% proficiency.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.1	Visually select a garden site.	5.1.1	With instructor's assistance and approval, select a site approximately 30 ft. x 30 ft. for a vegetable producing garden.
5.2	Prepare the soil for planting a vegetable garden.	5.2.1	Using hand ground breaker, prepare your selected garden site for planting.
5.3	Properly fertilize a vegetable garden plot	5.3.1	Following instructor's directions, using materials furnished, fertilize the plowed garden site.
5.4	Plant Vegetables in a prepared garden site.	5.4.1	Following instructor's directions, and proper reference material, seed the prepared garden site.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5.0

INTERIM PERFORMANCE OBJECTIVE 5.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5.1.1	Recall proper garden site selection factors	5.1.1	Orally state factors to be considered in garden site plot	5.1.1	Media Center Lecture Textbook	
5.1.2	Select garden site	5.1.2	Physically select a garden site	5.1.2	Demonstration Lecture Textbook	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5.0

INTERIM PERFORMANCE OBJECTIVE 5.2

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5.2.1	Recall proper soil preparation for garden planting	5.2.1	Orally recall proper methods of soil preparation			
5.2.2	Demonstrate proper soil preparation	5.2.3	Physically prepare the soil of the site selected			

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5.0

INTERIM PERFORMANCE OBJECTIVE 5.3

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5.3.1	Recall proper fertilizing methods and materials	5.3.1	Orally state the recommended fertilizing method and materials	5.3.1	Manufactures reference material Lecture Textbook Films	
5.3.2	Demonstrate proper fertilizing of the prepared garden soil	5.3.2	Physically fertilize the garden site soil	5.3.2	Demonstration Reference Manufactures materials	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5.0

INTERIM PERFORMANCE OBJECTIVE 5.4

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5.4.1	Recall planting methods	5.4.1	Orally state proper planting methods of those vegetables to be cultivated	5.4.1	Manufactures recommendations Media Center materials Textbook	
5.4.2	Demonstrate proper vegetables planting methods	5.4.2	Plant vegetables as recommended	5.4.2	Manufactures recommendation Material Demonstration Chalkboard Textbook	

COURSE AMERICAN INDUSTRIES

AGRICULTURE

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0.A

Container Growing

The learner with 80% proficiency, will fertilize, plant and cultivate seeds or seedlings to produce mature plants.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5A.1	Given containers and soil, you will prepare soil for planting.	5A.1.1	Given soil and the proper fertilizing agents, prepare the mixture (in containers) for planting seedlings or seeds.
5A.2	Given seeds or young plants, properly sow the seeds or seedlings issued.	5A.2.1	Plant the seeds or seedlings in the prepared soil containers at the correct depth, adding water as needed.
5A.3	Adding water, fertilizer and proper growing procedures, grow the planted seeds or seedlings to maturity.	5A3.1	Locating the planted seeds or seedlings in proper sun light or artificial light, cultivate your agriculture project to maturity.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5A.0

INTERIM PERFORMANCE OBJECTIVE 5A.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5A.1.1.1	Recall soil preparation	5A.1.1.1	State the proper mixture of soils for planting	5A.1.1.1	Textbook Lecture	
5A.1.1.2	Demonstrate the ability to properly mix soil for planting.	5A.1.1.2	Mix the soil ingredients given you in preparation for planting seeds or seedlings.	5A.1.1.2	Materials Demonstration	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5A.0

INTERIM PERFORMANCE OBJECTIVE 5A.2

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5A.2.1.1	Recall properly sowed seeds or seedlings.	5A.2.1.1	Orally state proper sowing of seeds or seedlings.	5A.2.1.1	Demonstration Lecture Film	
5A.2.1.2	Demonstrate proper seed or seedling sowing.	5A.2.1.2	Sow the seeds or seedlings.	5A.2.1.2	Demonstration Lecture	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5A.0

INTERIM PERFORMANCE OBJECTIVE 5A.3

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5A.3.1.1	Recognize proper cultivating methods.	5A.3.1.1	Orally state the proper cultivating methods necessary to produce mature plants.	5A.3.1.1	Textbook Lecture	
5A.3.1.2	Demonstrate proper cultivating methods.	5A.3.1.2	Locate your planted seeds or seedlings in proper climatic conditions and raise to maturity.	5A.3.1.2	Lecture Demonstration	

COURSE AMERICAN INDUSTRIES

A G R I C U L T U R E

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0

Conservation

The learner will define conservation practices relating to soil, water, and air, in writing, with 60% proficiency.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
6.1	The learner will define conservation.	6.1.1	Write a definition of conservation. a. The protection, improvement, and use of natural resources according to principles that will assure their highest economic or social benefits. b. The wise use of our natural resources.
6.2	Given a list of conservation practices for each (soil, water and air).	6.2.1	The learner will identify in writing two (2) methods of soil, water and air conservation. s use contour planting on slopes w use cover crops to help prevent excessive run offs s plant deep rooted crops a control smoke from industrial plants w construct dams to store water s use prescribed crop rotations a reduce exhaust from petroleum powered vehicles w protect wells and water supplies from contamination and pollution a plant more trees and other vegetation to return oxygen to the atmosphere s plant wind breaks to help control wind erosion w use terracing on steep slopes

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 6.0

INTERIM PERFORMANCE OBJECTIVE 6.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
6.1.1	Recall the meaning of conservation.	6.1.1	Recall a meaning of conservation	6.1.1	L/Dis: Transparencies	
6.1.2	Define conservation	6.1.2	Write the definition of conservation	6.1.2	Textbook Media Center Lecture	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 6.0

INTERIM PERFORMANCE OBJECTIVE 6.2

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
6.2.1	Recall conservation practices relating to water, soil and air	6.2.1	Orally describe conservation practices relating to soil, water, and air.	6.2.1	Lecture Discussion F. S.	
6.2.2	Define a description of air, soil and water conservation practices.	6.2.2	Write air, soil and water conservation practices. In writing, from an instructor's prepared list of conservation practices, select two for each: soil, water and air.	6.2.2	Handout Discussion Textbook	

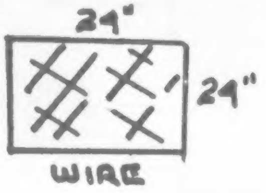
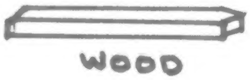
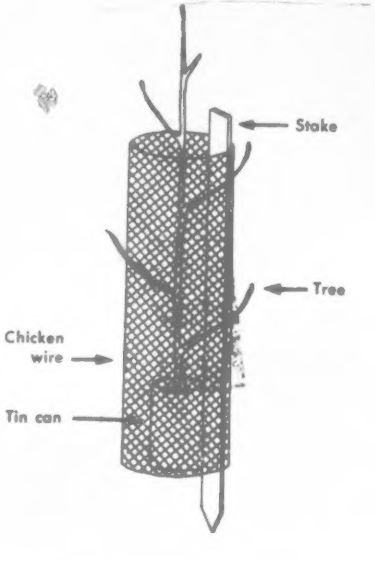
COURSE AMERICAN INDUSTRIES

AGRICULTURE

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0

Horticulture Maintenance

With 80% proficiency, the learner will cut the necessary materials to proper measurement to fabricate a "young tree" protector. He will assemble the pre-cut materials and assemble the protector.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.1	Cut the materials issued to correct length and size measurements to construct a young tree protector.   	7.1.1	You will be issued the following materials and you are to cut to correct length and size to construct a tree protector. 1) 36 inches of 2 inch chicken wire 2) 1 2lb. empty coffee can 3) 1 firing strip 24 inches x 2 inches 
7.2	Fabricate the cut materials into a tree protector.	7.2.1	Fabricate the pre-cut materials into a tree protector.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 7.0

INTERIM PERFORMANCE OBJECTIVE 7.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
7.1.1	Recall proper measuring.	7.1.1	Measure and cut the stock materials issued to construct a young tree protector	7.1.1	Demonstration Stock materials	
7.2.1	Recall assembling materials.	7.2.1	Assemble and fasten the cut materials into a tree protector.	7.2.1	Demonstration	

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.167 - level 1-E)

Performance Objective No. 1.0
Intermediate Objective No. 1.1

Source of your information ____
Author ____
Edition date ____

(Do not write on this sheet)

From the list of Agriculture occupations given in TPO 1.0, select two (2) and write a brief explanation of the responsibilities, training needed, and the wage scale expected from each.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.173 - level 2-F)

Performance Objective No. 1.0
Intermediate Objective No. 1.2

Source of your information ______________________
Author ______________________
Edition date ______________________

(Do not write on this sheet)

Select two (2) states of the United States and write a brief description of the major agriculture enterprises of each.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.161 - level 1-C)

Performance Objective No. 2.0
Intermediate Objective No. 2.1

Source of your information __________
Author __________
Edition date __________

(Do not write on this sheet)

Orally name eight (8) of the common garden tools from the display.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.163 - level 3-C)

Performance Objective No. 2.0
Intermediate Objective No. 2.2

Source of your information __________
Author __________
Edition date __________

(Do not write on this sheet)

Orally state the tool or tools to be used to accomplish the tasks stated in 2.2. Identify 3 tools of the 5 displayed.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(≍ 4.164 - level 2-C)

Performance Objective No. 2.0
Intermediate Objective No. 2.3

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Orally describe four (4) tools displayed and state the proper use for each.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.160 - level 3-C)

Performance Objective No. 3.0
Intermediate Objective No. 3.1

Source of your information ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

Identify and orally name four (4) of six (6) grass samples displayed.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.173 - level 2-F)

Performance Objective No. 3.0
Intermediate Objective No. 3.2

Source of your information ______ ______
Author ______
Edition date ______

(Do not write on this sheet)

Orally name three (3) characteristics or qualities of the grass samples identified in 3.1 and identify the results expected in cultivating each.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.161 - level 1-C)

Performance Objective No. 4.0
Intermediate Objective No. 4.1

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Orally identify the manual fertilizer spreader displayed and define the use of the calibrater.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.163 - level 3-C)

Performance Objective No. 4.0
Intermediate Objective No. 4.2

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

With a selected group of fellow learners, select a lawn plot on your school campus to be fertilized and demonstrate the proper use of a manual spreader.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.161 - level 1-C)

Performance Objective No. 4.0
Intermediate Objective No. 4.3

Source of your information ______
Author ______
Edition date ______

(Do not write on this sheet)

Individually demonstrate your ability to clean fertilizing equipment after use.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.163 - level 3-C)

Performance Objective No. 5.0
Intermediate Objective No. 5.1

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

With instructor's assistance, select a plot for a vegetable producing garden.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.168 - level 2-A)

Performance Objective No. 5.0
Intermediate Objective No. 5.2

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Using the equipment given you by your instructor, you are to prepare the selected garden site by properly breaking the soil.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.169 - level 2-D)

Performance Objective No. 5.0
Intermediate Objective No. 5.3

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Properly fertilize the broken soil fo the selected garden site. Use the materials issued by the instructor.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.70 - level 2-C)

Performance Objective No. 5.0
Intermediate Objective No. 5.4

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Seed the prepared garden site soil, with the seeds or seedlings given you by the instructor.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.169 - level 2-D)

Performance Objective No. 5A.0
Intermediate Objective No. 5A.1

Source of your information ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

With instructors assistance and your textbook as reference, prepare the soil and fertilizer mixture for planting.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.161 - level 1-C)

Performance Objective No. 5A.0
Intermediate Objective No. 5A.2

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Mix the fertilizer and soil in proportions and prepare the container(s) and plant seeds or seedlings.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.163 - level 3-C)

Performance Objective No. 5A.0

Intermediate Objective No. 5A.3

Source of your information ____________________

Author ____________________

Edition date ____________________

(Do not write on this sheet)

Locate the planted containers in the proper sunlight conditions for cultivating.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.172 - level 1-B)

Performance Objective No. 6.0
Intermediate Objective No. 6.1

Source of your information ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

On an Examination Sheet, define conservation.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.172 - level 1-B)

Performance Objective No. 6A.0
Intermediate Objective No. 6A.2

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

On the examination handout sheet, write two (2) methods of soil, water and air conservation by writing in S - W or A in the proper underlined space.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRICULTURE

(x 4.160 - level 3-C)

Performance Objective No.	7.0
Intermediate Objective No.	7.1

Source of your information ____________________

Author ____________________

Edition date ____________________

(Do not write on this sheet)

Measure and cut the materials issued you from measurements shown in I.P.O 7.1.

LEARNING PACKAGE

AMERICAN INDUSTRIES

AGRUCULTURE

(x 4.161 - level 1-C)

Performance Objective No. 7.0
Intermediate Objective No. 7.2

Source of your information ____________________
Author ____________________
Edition date ____________________

(Do not write on this sheet)

Assemble the pre-cut materials into a tree protector.

AMERICAN INDUSTRY

CONSTRUCTION

1.0 OCCUPATIONS

2.0 CHARACTERISTICS OF WOOD MATERIALS

3.0 HAND TOOLS

4.0 WOOD JOINING AND FASTENING

5.0 FINISHING

6.0 MASS PRODUCTION

COURSE AMERICAN INDUSTRY

(CONSTRUCTION)

TERMINAL PERFORMANCE
OBJECTIVE NO. 1.0

OCCUPATIONS

With 75% proficiency, the learner will list the occupational opportunities available that relate directly to the woods area.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.1	The learner will identify seven occupations of the wood industry. 1. Forester 2. Lumberman 3. Mill Worker 4. Carpenter (rough) 5. Finish Carpenter 6. Cabinet Maker 7. Pattern Maker	1.1	In writing, list seven (7) occupations of the wood industry.
1.2	The learner will write a brief description of one of the occupations of the wood industry.	1.2	From the list of seven (7) occupations given, write a brief description of one of these occupations using textbook or other media material available.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 1.0

INTERIM PERFORMANCE OBJECTIVE (1.1) - (1.2)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
1.1.1	The learner will recall several occupations of the wood industry.	1.1.1	Recall several occupations of the wood industry.	1.1.1	Lecture Textbook	
1.1.2	The learner will identify several occupations of the wood industry.	1.1.2	Identify by underlining seven (7) occupations given to you by your teacher.	1.1.2	Lecture Textbook Media Center	
1.2.1	The learner will recall a brief description of one of the occupations of the wood industry.	1.2.1	Recall orally the occupations of the wood industry given you by your teacher.	1.2.1	Textbook Lecture	
1.2.2	The learner will define the occupations of the wood industry.	1.2.2	Write a brief description of the seven (7) occupations given to you by your teacher.	1.2.2	Media Center Guidance Department Textbook	

COURSE AMERICAN INDUSTRY

CONSTRUCTION

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0

Characteristics of Wood Materials

With 70% proficiency, the learner will identify, orally and in writing, four (4) woods commonly used in the woodworking laboratory and three (3) manufactured wood materials.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.1	The learner will identify orally four (4) commonly used laboratory woods: 1. mahogany 3. Pine 2. walnut 4. Poplar	2.1	Identify orally the four (4) wood samples shown by your teacher.
2.2	The learner will, in writing, list the basic color and workability of commonly used woods.,	2.2	List, in writing, the basic color and working ability of the four (4) commonly used woods.

NAME	COLOR	WORK ABILITY
1. Mahogany	Med. Red	Soft
2. Pine	White	Soft
3. Poplar	Yellow Green	Med.
4. Walnut	Brown	Med.

COURSE AMERICAN INDUSTRIES
CONSTRUCTION

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0 Characteristics of Wood Materials

(Cont.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.3	The learner will identify, in writing, at least three (3) manufactured wood materials: 1. Plywood 2. Particle board 3. "Masonite"	2.3	Identify, in writing, the three (3) manufactured wood materials samples shown by your teacher.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 2.0

INTERIM PERFORMANCE OBJECTIVE(2.1)-(2.2)-(2.3)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
2.1.1	The learner will recall four (4) commonly used laboratory woods.	2.1.1	Orally recall four (4) wood samples shown by your instructor.	2.1.1	Wood Samples Lecture	
2.1.2	The learner will identify four (4) commonly used laboratory woods.	2.1.2	Match the correct name to the wood samples.		Wood samples	
2.2.1	The learner will recall the color of four (4) commonly used woods.	2.2.1	Orally recall the basic color and workability of four (4) commonly used woods.	2.2.1	Demonstration Lecture Wood samples	
2.2.2	The learner will identify the work ability of four (4) commonly used woods and their color.	2.2.2	List, in writing, the basic color and workability of wood samples.	2.2.2	Wood samples	
2.3.1	The learner will recall the uses of several manufactured wood materials.	2.3.1	Recall the uses of manufactured wood materials.	2.3.1	Lecture Textbook Samples	
2.3.2	The learner will identify, in writing, three (3) samples of manufactured wood products.	2.3.2	Identify the three (3) kinds of manufactured wood products shown by your teacher.	2.3.2	Samples	

COURSE AMERICAN INDUSTRY

CONSTRUCTION

TERMINAL PERFORMANCE
OBJECTIVE NO. 3.0 Hand Tools

With 70% accuracy, the learner will orally identify sixteen (16) basic hand tools of the wood laboratory and properly clean and store these tools.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	The learner will orally identify these sixteen (16) hand tools of the wood laboratory: 1. hand saw 2. smooth plane 3. wood chisel 4. try square 5. framing square 6. back saw 7. coping saw 8. compass saw 9. wood rasp 10. hand drill 11. twist drill 12. brace 13. auger bit 14. claw hammer 15. screwdriver 16. wood mallet	3.1	Orally identify the hand tools displayed by the teacher.
3.2	The learner will clean and properly store hand tools used in the wood laboratory.	3.2	You will clean and properly store hand tools used in the wood laboratory.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 3.0

INTERIM PERFORMANCE OBJECTIVE (3.1) - (3.2)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
3.1.1	The learner will recall hand tools used in the wood laboratory.	3.1.1	Recall sixteen (16) hand tools used in the wood laboratory.	3.1.1	Lecture Hand Tools	
3.1.2	The learner will identify hand tools used in the wood laboratory.	3.1.2	Identify the hand tools displayed by the teacher.	3.1.2	Hand Tools Tool Name Tags	
3.2.1	The learner will recall how to clean and store hand tools.	3.2.1	Recall orally the proper method of cleaning and storing hand tools of the wood laboratory.	3.2.1	Lecture and Demonstration Hand Tools	
3.2.2	The learner will perform the proper method of cleaning and storing hand tools.	3.2.2	Clean and store three (3) tools given to you by the teacher.	3.2.2	Tools	

COURSE AMERICAN INDUSTRY

CONSTRUCTION

TERMINAL PERFORMANCE
OBJECTIVE NO. 4.0

Wood Joining and Fastening

The learner will with 75% proficiency, demonstrate his ability to join or fasten wood stock, using one (1) or more of three (3) basic methods, and he will evaluate the quality of the fastening and joining of his product.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.1	The learner will square and prepare (sand) wood stock for joining.	4.1	Square and sand the wood stock to be joined. Follow these steps of procedure: 1. cut stock to approximate length 2. sand to proper dimensions, being sure stock is square 3. drill any pilot holes necessary.
4.2	The learner will sand surface of wood stock using correct procedure and materials.	4.2	Sand surface of stock with sanding block and proper grit of sand paper.
4.3	The learner will identify, orally, three (3) methods of wood joining: 1 - nails 2 - screws 3 - glue	4.3	Orally identify three (3) samples of basic wood joining shown you by your teacher.
4.4	The learner will join stock to complete a custom produced product.	4.4	Assemble the custom produced product using the joining method demonstrated by your teacher.

COURSE AMERICAN INDUSTRY

CONSTRUCTION

TERMINAL PERFORMANCE
OBJECTIVE NO. 4.0

Wood Joining and Fastening

(Cont.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.5	The learner will evaluate the quality of his custom produced product. 1. parts are square and of proper length 2. parts are properly sanded smooth 3. assembly is tight and parts fit together smoothly	4.5	Evaluate the quality of your custom produced product by assigning one of the following rating scales to each quality statement: Excellent = 4 points Good = 3 points Average = 2 points Poor = 1 point

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 4.0

INTERIM PERFORMANCE OBJECTIVE(4.1)-(4.2)-(4.3)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
4.1.1	The learner will recall how to square and prepare wood stock for joining.	4.1.1	Recall orally the method of squaring and preparing stock for joining.	4.1.1	Demonstration Hand Tools	
4.1.2	The learner will identify the method of squaring and preparing stock for joining.	4.1.2	Square stock and prepare for joining.	4.1.2	Saw Square Hand Plane	
4.2.1	The learner will recall the correct procedure and materials for sanding	4.2.1	Recall the procedure and grit of sand paper for correct sanding of stock.	4.2.1	Demonstration	
4.2.2	The learner will correctly sand wood stock.	4.2.2	Correctly sand wood stock.	4.2.2	Sanding Block Sand Paper	
4.3.1	The learner will recall three (3) methods of joining wood. 1. nails 2. screws 3. glue	4.3.1	Recall orally three (3) methods of joining wood.	4.3.1	Demonstration Samples	
4.3.2	The learner will identify three (3) methods of joining wood.	4.3.2	Identify three (3) methods of joining wood by orally identifying the samples displayed by your teacher.	4.3.2	Sample Wood Joints	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 4.0

INTERIM PERFORMANCE OBJECTIVE (4.4) - (4.5)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
4.4.1	The learner will recall how to join stock to complete a custom produced product.	4.4.1	Recall orally the procedure for assembling the custom produced product.	4.4.1	Demonstration	
4.4.2	The learner will use one or more methods of joining wood to assemble a custom produced product.	4.4.2	Assemble your custom produced product using the correct procedures demonstrated by your teacher.	4.4.2	Product Components Fasteners	
4.5.1	The learner will recall the quality statements that apply to the custom produced product. 1. parts are square and of proper length 2. parts are properly sanded smooth 3. assembly is tight and parts fit together smoothly	4.5.1	Recall and orally state quality statements about the custom produced product.	4.5.1	Teacher Lecture Sample Product	
4.5.2	The learner will evaluate the custom produced product.	4.5.2	Evaluate your custom produced product according to the rating scale given in C. M. 4.5 .	4.5.2	Learner's Custom-Produced Product Rating Scale	

COURSE AMERICAN INDUSTRY

CONSTRUCTION

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0 Finishing

With 75% proficiency, the learner will identify given finishing materials and demonstrate his ability to properly prepare and finish a wood surface. He will also evaluate the quality of the finish on his product and will demonstrate his ability to thoroughly clean and store the tools and materials used in finishing.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.1	The learner will identify the three major steps in applying a finish to a wood surface: 1. staining 2. sealing 3. finishing	5.1	Using your text as a guide, define the three (3) major steps in applying a finish.
5.2	The learner will properly apply a stain to a wood surface.	5.2	Apply stain to the surface of the custom produced product.
5.3	The learner will properly apply a selected finish to a wood surface.	5.3	Apply finish to the properly prepared and stained surface of your custom produced product.
5.4	The learner will evaluate the quality of the finish on his product according to the following quality statements: 1. the color of the wood finish is uniformly blended 2. the surface of the product is smooth and free of laps or runs 3. the finish covers all of the surface of the product	5.4	Using the following rating scale evaluate the quality of the finish of your customproduced product. Excellent = 4 points Good = 3 points Average = 2 points Poor = 1 point
5.5	The learner will properly and safely clean and store the tools and materials used in finishing.	5.5	Properly and safely clean and store all tools and equipment used in finishing.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5.0

INTERIM PERFORMANCE OBJECTIVE (5.1)-(5.2)-(5.3)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5.1.1	The learner will recall three (3) steps in applying a finish to a wood surface.	5.1.1	Recall orally the three (3) steps in applying a finish to a wood surface.	5.1.1	Demonstration	
5.1.2	The learner will identify three (3) steps in applying a finish to a wood surface.	5.1.2	Identify, in writing, the three (3) steps in finishing a wood surface.	5.1.2	Demonstration	
5.2.1	The learner will recall how to stain a wood surface.	5.2.1	Recall orally the proper method of staining a wood surface.	5.2.1	Demonstration	
5.2.2	The learner will demonstrate the proper method of staining a wood	5.2.2	Stain the surface of your produced product.	5.2.2	Custom Produced Product Stain	
5.3.1	The learner will recall how to finish a wood surface.	5.3.1	Recall orally the proper procedure for finishing a wood surface.	5.3.1	Demonstration	
5.3.2	The learner will demonstrate the proper procedure for finishing a wood surface.	5.3.2	Finish the wood surface of your custom produced product.	5.3.2	Custom Produced Product Brush or spray Finish	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 5.0

INTERIM PERFORMANCE OBJECTIVE (5.4) - (5.5)

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
5.4.1	The learner will recall those statements which describe a quality finish: 1. The color of the wood finish is uniformly blended 2. The surface of the product is smooth and free of laps or runs 3. The finish covers all of the surface of the product	5.4.1	Recall orally those statements that describe a quality finish.	5.4.1	Lecture Sample Product	
5.4.2	The learner will evaluate the quality of the finish on his product.	5.4.2	Evaluate the finish on your product using the rating scale given in C.M. 5.4 .	5.4.2	Learner's Custom Produced Product Rating Scale	
5.5.1	The learner will recall how to properly and safely clean and store the tools and materials used in finishing and staining.	5.5.1	Recall how to properly and safely store and clean the tools and materials used in finishing and staining.	5.5.1	Demonstration	
5.5.2	The learner will demonstrate how to safely clean and store the tools and materials used in finishing.	5.5.2	Clean and store the materials used in staining and in finishing.	5.5.21	Solvent Rags Container Cleaner Safe Rag Container	

COURSE AMERICAN INDUSTRY

CONSTRUCTION

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0

Mass Production

The learner will, with 80% proficiency, demonstrate his understanding of manufacturing and mass production methods and will participate in a mass production activity.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
6.1	The learner will identify the four (4) operations by which men and machines change raw materials: 1. cutting 2. 2. forming 3. fastening 4. finishing	6.1	In writing, list the four (4) operations by which men and machines change raw materials.
6.2	The learner will recall and become familiar with several terms related to mass production: 1. interchangeable 2. tolerance 3. assembly line 4. flow chart 5. pilot model 6. lead time 7. quality control 8. jigs and fixtures 9. inspection	6.2	In writing, list seven (7) terms that relate to mass production.
6.3	The learner will recall the three (3) essentials of industry. 1. Material Resources 2. HumanResources 3. Capital Resources	6.3	Identify , by underlining, three (3) essentials of industry form a list of statements given to you by your teacher.

COURSE AMERICAN INDUSTRY

CONSTRUCTION

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0 Mass Production

(Cont.)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
6.4	Given a demonstration of mass production steps, the learner will draw a flowchart of the operation.	6.4	Using the steps for manufacturing shown in the demonstration, correctly place these steps on a flowchart form.
6.5	The learner will participate in a mass production activity.	6.5	Perform the operations at the work stations assigned you.

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 6.0

INTERIM PERFORMANCE OBJECTIVE 6.1

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
6.1.1	The learner will recall the four (4) operations by which men and machines change raw materials.	6.1.1	Recall orally the four (4) operations by which men and machines change raw materials.	6.1.1	Lecture Textbook	
6.1.2	The learner will identify, in writing, the four (4) operations by which men machines change raw materials.	6.1.2	Identify, in writing, the four (4) operations by which men and machines change raw materials.	6.1.2	Lecture Textbook	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 6.0

INTERIM PERFORMANCE OBJECTIVE 6.2

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
6.2.1	The learner will recall several terms related to mass production.	6.2.1	Recall orally nine (9) terms that relate to mass production.	6.2.1	Lecture Textbook	
6.2.2	The learner will identify nine (9) terms related to mass production.	6.2.2	Identify by underlining nine (9) terms related to mass production froma list provided by your teacher.	6.2.2	Handout Lecture	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 6.0

INTERIM PERFORMANCE OBJECTIVE 6.3

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
6.3.1	The learner will recall three (3) essentials of industry.	6.3.1	Recall orally the three (3) essentials of industry	6.3.1	Lecture Media Center Textbook	
6.3.2	The learner will identify the three (3) essentials of industry.	6.3.1	Identify, by underlining the three (3) essentials of industry in the list given to you by your instructer.	6.3.2	Hand out Lecture	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 6.0

INTERIM PERFORMANCE OBJECTIVE 6.4

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
6.4.1	The learner will recall the operation of a flowchart.	6.4.1	Recall orally three (3) operations of a flow chart.	6.4.1	Lecture Demonstration	
6.4.2	The learner will generate a flow chart.	6.4.2	Using the production steps for your mass produced product, correctly place these operations on the flow chart form provided by your teacher	6.4.2	Flow Chart Form	

FUNCTIONAL PERFORMANCE ANALYSIS

TERMINAL PERFORMANCE OBJECTIVE 6.0

INTERIM PERFORMANCE OBJECTIVE 6.5

NO.	LEARNING STEPS	NO.	CRITERION PERFORMANCE EVALUATION (Response)	NO.	METHOD/MEDIA SELECTION	TIME REQ
6.5.1	The learner will recall the operations of the work stations assigned.	6.5.1	Recall orally the operations of the work stations assigned.	6.5.1	Demonstration Sample products Jigs ¼Fixtures Hand ¼Power Tools	
6.5.2	The learner will identify the operations of the work stations assigned.	6.5.2	During a dry run with your instructor identify to him and properly perform operations at the work station.	6.5.2	In Process Samples Work Station Jigs and Fixtures Tools and Equipment	
6.5.3	The learner will participate in a mass production activity.	6.5.3	Perform the operations at the work station assigned to you during the mass production activity.	6.5.3	Raw and In Process Materials Work Station Jigs and Fixtures Tools and Equipment	

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.167 - level 1-C)

Performance Objective No. 1.0 OCCUPATIONS
Intermediate Objective No. 1.1

Source of your information ______ ______
Author ______
Edition date ______

(Do not write on this sheet)

Identify by underlining seven (7) occupations of the wood industry

- Cabinetmaker
- Barber
- Rough Carpenter
- Patternmaker
- Painter
- Brick Mason
- Millworker
- Roofer
- Finish Carpenter
- Lunberman
- Salesman
- Forester
- Forest Ranger
- Parking Attendant
- Tile Setter

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.167 - level 1- C)

Performance Objective No.	1.0	Occupations
Intermediate Objective No.	1.2	

Source of your information ______ ______

Author ______

Edition date ______

(Do not write on this sheet)

Write a brief description of all of the seven (7) occupations given you by your instructor. Information may be obtained from your textbook, media center or guidance office.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.160 - level 3-C)

Performance Objective No. 2.0
Intermediate Objective No. 2.1 Characteristics of Wood Materials

Source of your information ______________ ______________
Author ______________
Edition date ______________

(Do not write on this sheet)

Identify the four (4) samples of wood display by the teacher by matching the name of the wood with the sample:

SAMPLE NO.	NAME
________	Mahogany
________	Pine
________	Poplar
________	Walnut

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.169 - level 2-D)

Performance Objective No. 2.0
Intermediate Objective No. 2.2 Characteristics of Wood Materials

Source of your information ______________ ______________
Author ______________
Edition date ______________

(Do not write on this sheet)

List, in writing, the basic color and working ability of wood samples:

NAME	COLOR	WORKABILITY
Mahogany		
Pine		
Poplar		
Walnut		

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.160 - level 3-C)

Performance Objective No. 2.0 Characteristics of Wood Materials
Intermediate Objective No. 2.3

Source of your information ______________ ______________
Author ______________
Edition date ______________

(Do not write on this sheet)

Identify the three (3) samples of manufactured wood products displayed by the teacher by matching the name of the product with the sample:

SAMPLE NO.	NAME
______	Plywood
______	Particle Board
______	Masonite

C-27

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.161 - level 1-C)

Performance Objective No. 3.0 HAND TOOLS

Intermediate Objective No. 3.1

Source of your information ______________ ______________

Author ______________

Edition date ______________

(Do not write on this sheet)

Identify the hand tools displayed by the teacher by placing the name tag for a tool on the correct tool in the display.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.161 - level 1-C)
(x 4.168 - level 2-D)

Performance Objective No. 3.0
Intermediate Objective No. 3.2 HAND TOOLS

Source of your information ____________ ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

Clean and store three (3) tools given to you by your teacher.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.168 - level 2-A)

Performance Objective No. 4.0 WOOD JOINING AND FASTENING
Intermediate Objective No. 4.1

Source of your information ____________ ____________________
Author ____________________________________
Edition date ____________________________________

(Do not write on this sheet)

Using a saw, square and hand plane, prepare stock to correct width and length. Drill any holes necessary with brace and correct size bit or hand drill and correct size of twist drill.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.168 - level 2-A)

Performance Objective No. 4.0 WOOD JOINING AND FASTENING
Intermediate Objective No. 4.2

Source of your information ____________ ____________
Author ________________________
Edition date ________________________

(Do not write on this sheet)

Using the correct procedure use a sanding block and sand the surfaces of wood stock.

1. sand first with 80 grit paper
2. obtain 120 grit paper fromyour teacher sand wood stock again
3. obtain 220 grit paper from your teacher and final sand the wood stock

C-31

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.168 - level 2-A)

Performance Objective No. 4.0 WOOD JOINING AND FASTENING
Intermediate Objective No. 4.3

Source of your information ____________ ____________
Author ________________________
Edition date ________________________

(Do not write on this sheet)

From the samples of joints shown you by your teacher, identify if it is put together with nails, screws, or glue.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.168 - level 2-A)

Performance Objective No. 4.0 WOOD JOINING AND FASTENING
Intermediate Objective No. 4.4

Source of your information ____________ ________________
Author ______________________________
Edition date ______________________________

(Do not write on this sheet)

Assemble your custom produced products using the correct procedure demonstrated to you by your teacher.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.177 - level 1-B)
(x 4.173 - level 2-F)

Performance Objective No. 4.0
Intermediate Objective No. 4.5

Source of your information ____________ ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

Evaluate your custom produced product for each of the quality statements below according to the rating scale provided.

STATEMENT	RATING
1. Parts are square and of proper length.	________
2. Parts are properly sanded smooth.	________
3. Assembly is tight and parts fit together smoothly.	________

RATING SCALE

Excellent = 4 points

Good = 3 points

Average = 2 points

Poor = 1 point

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.161 - level 1-C)
(x 4.168 - level 2-A)

Performance Objective No. 5.0
Intermediate Objective No. 5.1 FINISHING

Source of your information ____________ ________________
Author ________________________________
Edition date ________________________________

(Do not write on this sheet)

Using your assigned textbook, briefly define the following three (3) major steps in applying a finish.

1. staining
2. sealing
3. finishing

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.161 - level 1-C)
(x 4.168 - level 2-A)

Performance Objective No. 5.0 FINISHING
Intermediate Objective No. 5.2

Source of your information ____________ ________________
Author ________________________
Edition date ________________________

(Do not write on this sheet)

Apply stain to the wood surface of your custom produced product.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.161 - level 1-C)
(x 4.168 - level 2-A)

Performance Objective No. 5.0 FINISHING
Intermediate Objective No. 5.3

Source of your information ______________ ______________
Author ______________
Edition date ______________

(Do not write on this sheet)

Apply finish to the properly prepared and stained surface of your custom produced product.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.172 - level 1-B)
(x 4.173 - level 2-F)

Performance Objective No. 5.0
Intermediate Objective No. 5.4 FINISHING

Source of your information ______________ ______________
Author ____________________________
Edition date ____________________________

(Do not write on this sheet)

Evaluate your custom produced product for each of the quality statements below according to the rating scale provided.

STATEMENT	RATING
1. The color of the wood finish is uniformly blended.	Excellent = 4 points
2. The surface of the product is smooth and free of laps or runs.	Good = 3 points
3. The finish covers all of the surface of the rproduct.	Average = 2 points
	Poor = 1 point

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.161 - level 1-C)
(x 4.166 - level 2-G)

Performance Objective No. 5.0 FINISHING
Intermediate Objective No. 5.5

Source of your information ______________ ______________
Author ______________
Edition date ______________

(Do not write on this sheet)

After the completion of the finishing step, properly and safely clean and store all tools and materials.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION

(x 4.161 - level 1-C)

Performance Objective No. 6.0 MASS PRODUCTION
Intermediate Objective No. 6.1

Source of your information ______________ ____________________
Author ________________________________
Edition date ________________________________

(Do not write on this sheet)

Identify, in writing, the four (4) operations by which men and machines change raw materials.

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION
(X4.161-2G)

Performance Objective No. 6.0 (Mass Production)
Intermediate Objective No. 6.2

Source of your information ______ ______
Author ______
Edition date ______

(Do not write on this sheet)

Identify nine (9) terms that relate to mass production.

- Interchangeable
- Florida
- Assembly line
- Ferreous
- Plywood
- Tolerance
- Flow Chart
- Daylight Saving Time
- Lead Time
- Inspection
- Failure
- Pilot Model
- Jigs and Fixtures
- Hardware
- Assembly Line
- Quality Control

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION
(X 4.161-2 G)

Performance Objective No. 6.0 (Mass Production)
Intermediate Objective No. 6.3

Source of your information ____________ ______________
Author ______________________________
Edition date ______________________________

(Do not write on this sheet)

Identify, by underlining, the three (3) essentials of industry in the list below.

Natural Resources
Natural Foods
Human Race
Human Resources
Capital Resources
State Resources

LEARNING PACKAGE

AMERICAN INDUSTRIES

CONSTRUCTION
(X-4.161-level 2-G)
(X-4.163-level 3-C)

Performance Objective No. 6.0 (Mass Production)
Intermediate Objective No. 6.4

Source of your information ______________ ______________
Author ______________
Edition date ______________

(Do not write on this sheet)

Using the production steps for your mass produced product, correctly place these operations on the flow chart form provided by your teacher.

LEARNING PACKAGE

AMERICAN INDUSTRIES

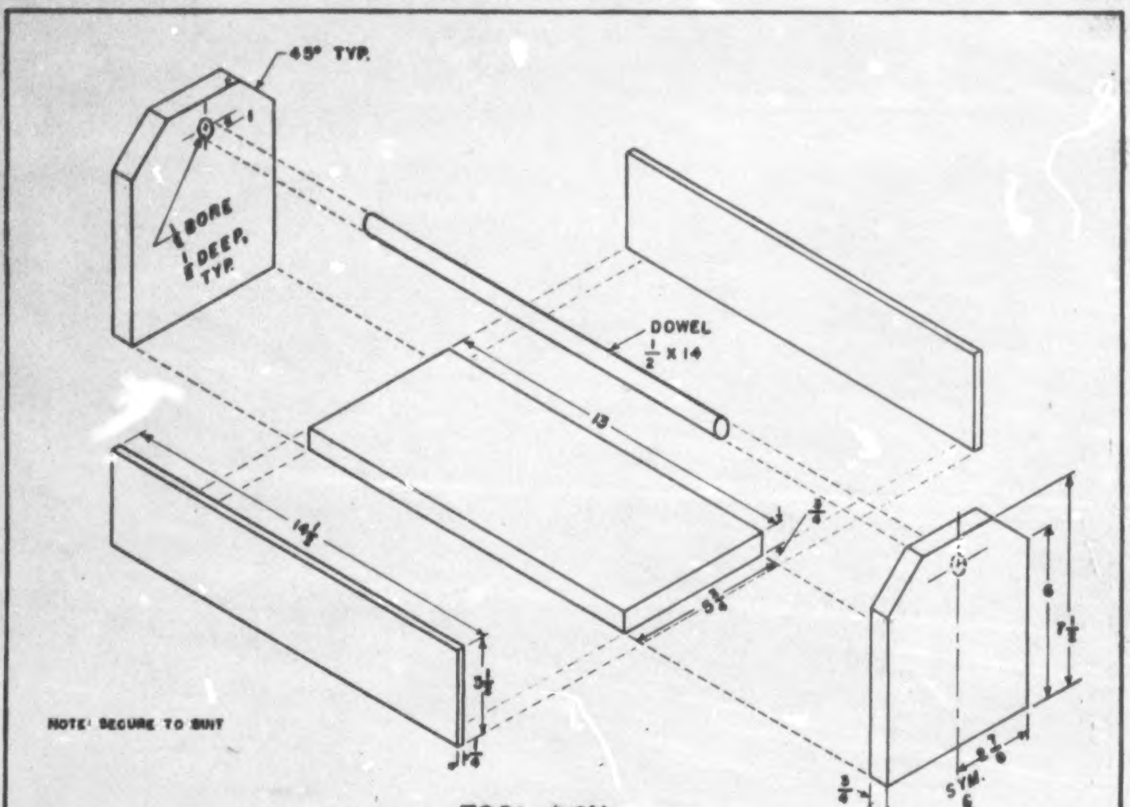
CONSTRUCTION
(X-4.160-level 3C)
(X-4.161-level 2G)

Performance Objective No. 6.0 (Mass Production)
Intermediate Objective No. 6.5

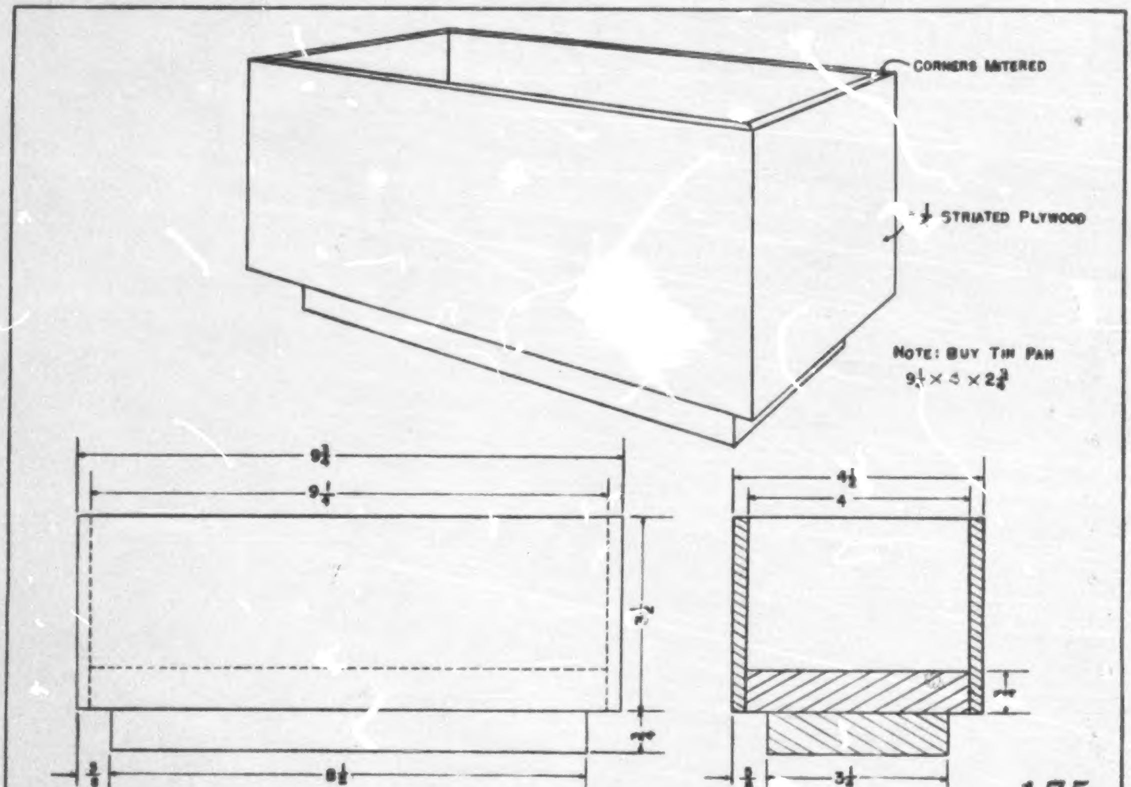
Source of your information ____________ ____________
Author ____________
Edition date ____________

(Do not write on this sheet)

Perform the operations at the work station assigned to you.


45° TYP.
1
1/4 BORE
1/8 DEEP, TYP.
DOWEL
1/2 X 14
13
14 1/2
3/4
5 3/4
6
7 1/2
2 7/8
SYM.
℄
3 1/2
1/4
3/4
NOTE: SECURE TO SUIT

TOOL BOX


CORNERS MITERED
1/4 STRIATED PLYWOOD
NOTE: BUY TIN PAN
9 1/4 × 4 × 2 3/4
9 3/4
9 1/4
8 1/2
3/8
4 1/2
4
3 1/4
3/8

PLANTER